

PAD-MOUNTED DISTRIBUTION TRANSFORMERS



A SPIRE POWER SOLUTIONS COMPANY

Power Partners' pad-mounted distribution transformers are designed, built and tested per ANSI/IEEE C 57.12, NEMA and DOE 2016 standards. Our transformers are RUS Certified, and built to allow safe, reliable operation in underground electrical distribution networks. Designed to be installed in radial or loop feed distribution systems, our transformers can be configured to meet specified switching and protective requirements.

Ratings

- Single Phase – Up to 167 kVA
- Primary voltages up to 25 kV, 125 kV BIL
- Secondary voltages up to 480/240 Volts, 30 kV BIL
- Cooling types - ONAN and KNAN



Power Partners

200 Newton Bridge Road, Athens GA 30607

Standard Features

- Crowned tank with provisions for lifting
- Tamper proof hinged door
- Captive Penta head door locking bolt
- Removable sill
- Parking stand for load break primary connector
- HV Bushing wells for dead front connectors
- Low voltage stud type bushings
- Automatic pressure relief device
- Mineral oil filled
- Tank grounding provisions
- ½" NPT Fill Plug and Drain Plug
- Bayonet Fuse coordinated with Isolation Link

Optional Features

- 304L stainless steel or combination stainless/mild steel construction
- Bayonet fuse coordinated with partial range current limiting fuse
- Secondary breaker and coordinated internal primary fuse
- No-load tap changer
- FR3 fluid
- Drain valve
- Internal Fault Detector
- Ground connectors

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Industry Standards

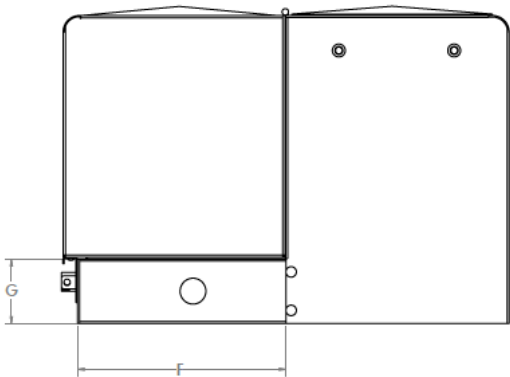
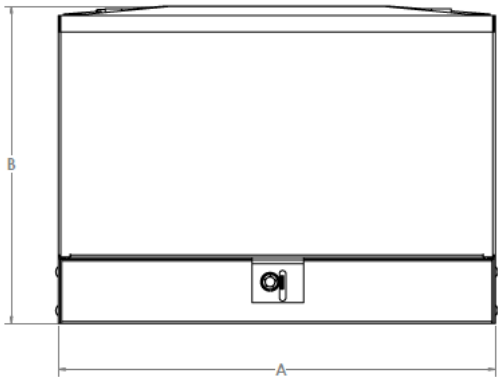
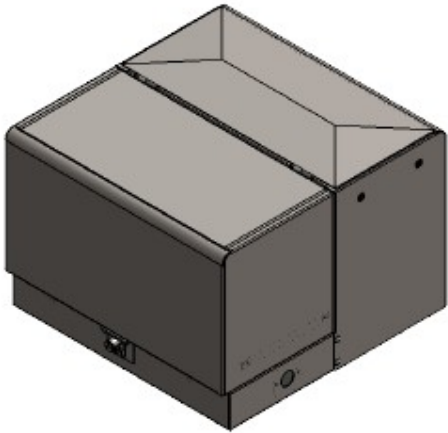
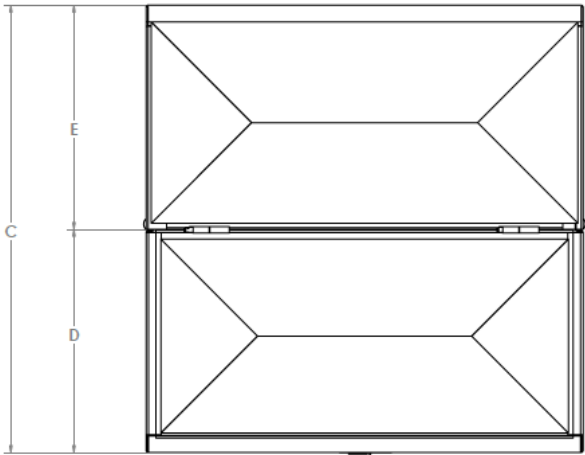
The design, manufacture and testing of our single-phase pad-mounted distribution transformers strictly comply with the latest revisions of applicable ANSI, IEEE, NEMA and Department of Energy standards.

C57.12.00	IEEE standard for standard general requirements for liquid-immersed distribution, power, and regulating transformers
C57.12.38	IEEE standard for pad-mounted type, self-cooled, single-phase distribution transformers 250 kVA and smaller: High voltage, 34500GrdY/19920V and below; Low voltage, 480/240V and below
C57.12.28	IEEE standard for pad-mounted equipment - Enclosure integrity
C57.12.90	IEEE standard test code for liquid-immersed distribution, power, and regulating transformers
C57.91	IEEE guide for loading mineral oil immersed transformers
NEMA TR 1	Transformers, step voltage regulators and reactors
10 CFR Part 431	Department of Energy - Energy Conservation Program: Energy conservation standards for distribution transformers; Final rule

Typical Dimensions

kVA	A	B	C	D	E	F	G	Weight	Oil
10	34	26	32	18	14	16	5	660	40
15	34	26	32	18	14	16	5	680	38
25	34	26	34	18	16	16	5	745	39
37.5	34	26	34	18	16	16	5	820	42
50	34	26	36	18	18	16	5	850	41
75	36	26	39	18	21	16	5	995	51
100	40	32	43	18	25	16	5	1080	47

Dimensions shown are in inches, weights in pounds and oil quantities in gallons.



Paint

Per the requirements of IEEE C57.12.28, all pad-mounted distribution transformers are finished in Munsell Number 7GY 3.29/1.5 high-gloss or 7GY 3.29/1.5 SG semi-gloss pad-mount green. Our compliance with the above performance standard has been certified by an independent test facility.

Testing

The Power Partners commitment to manufacture quality pad-mounted distribution transformers is backed by a series of transformer tests used to verify conformance to performance characteristics outlined in the latest revisions of ANSI C57.12.00, ANSI C57.12.90 and ANSI C57.12.29.

Factory tests are performed on a transformer to confirm that it is properly designed and constructed to carry rated load and that it will withstand the conditions it will be exposed to in service.

Each pad-mounted transformer manufactured by Power Partners must undergo a series of routine tests.

1. Polarity and phase-relation tests on the rated voltage connection
2. Turns ratio on the rated voltage connection and on all tap connections
3. Full wave impulse (for the high voltage winding only)
4. Applied voltage test of the HV winding (for radial feed designs only)
5. Applied voltage test of the LV winding
6. Induced overvoltage test
7. No-load loss and excitation current at 100% of rated voltage and at rated power frequency on the rated voltage tap connection
8. Resistance measurements of all windings on the rated voltage tap
9. Load loss and impedance voltage at rated current and rated frequency on the rated voltage connection
10. Tank leak test

Some tests are performed at the option of the customer.

1. Audible sound level
2. Temperature rise

Test equipment is calibrated on a scheduled basis by trained technicians. Calibration records are maintained in accordance with the quality system procedures. These are audited annually by a third party in accordance to ISO.